

Ioanna - Georgia Athanasoulia, Ph.D. Chemical Engineer - NTUA



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PERSONAL INFORMATION

Nationality :

Greek

TEE-TCG member

Work license number: 134758

ACADEMIC QUALIFICATIONS - Research experience

22/11/2019 – Today: *Postdoctoral Researcher* as part of the Structures and Materials Research Group in the Agricultural Engineering Department of the Agricultural University of Athens in the funded by the EU '**USABLE packaging**' project (<https://www.usable-packaging.eu/>), in the 'Exploitation of food industry by-products for the production of biogenic biodegradable, active food packaging' with acronym '**VIOSTROFI**' national research program, (<https://www.eurofilm.gr/en/news/viostrofi/>) and in the « Utilization of agricultural crop residues sugar beet and by-products of the sugar production process for production of biogenic and biosynthetic biodegradable packaging materials» - «**Beet2Bioref**» research program.

2015 – 21/11/2019: *Doctor of Philosophy (Ph.D.)* in Biomedical Polymers

Thesis title: '*Design and development of biomaterials from hybrid composites of poly (lactic acid)*', (<https://www.didaktorika.gr/eadd/handle/10442/46759?locale=en>)

Supervisor: Prof. P. Tarantili

Final Grade: 5.00 / 5.00.

Polymer Technology Laboratory, Department of "Synthesis and Development of Industrial Processes", School of Chemical Engineering, National Technical University of Athens (NTUA).

2013 – 2015: *Master of Science (MSc)* in the Interdisciplinary Interdepartmental Postgraduate Program 'Materials Science and Technology', NTUA,

Final Grade: 8.64 / 10.00.

MSc thesis: '*Preparation and Study of Mixtures of Poly (Lactic Acid) and Poly (Ethylene Glycol)*'.

2008 – 2013: *Diploma* in Chemical Engineering (Organic Industries – Polymers), NTUA,

Final Grade: 7.69 / 10.00.

Diploma thesis: '*Hybrid Polysiloxane Nanocomposites with Bioactive Fillers for Biomedical Applications*'.

LABORATORY ASSOCIATE - Teaching assistance.

"Unsaturated Polyester Hardening", "Fabrication and study of composite materials with polymer matrix", "Mechanical properties of polymers: I. Three-point bending test, II. Impact test", "Blending – Molding of polymers in twin-screw extruder", "Expansion Study – Molding of expandable Polystyrene" of undergraduate subjects "Science and Technology of Polymers I and II" of School of Chemical Engineering, National Technical University of Athens.

PUBLICATIONS IN INTERNATIONAL SCIENTIFIC JOURNALS WITH REVIEWERS

(Citations: <https://scholar.google.com/citations?hl=el&user=bjCjNtsAAAAJ>)

- **Polymer International**, 'Study of thermomechanical, structural and antibacterial properties of poly(lactic acid) reinforced with graphene oxide nanoparticles via melt mixing', Athanasoulia, Ioanna-Georgia; Giachalis, Konstantinos; Korres, Dimitrios; Todorova, Nadia ; Giannakopoulou, Tatiana; Tarantili, P.; Trapalis, Christos, *Polymer International*, **(2020)**, DOI: 10.1002/pi.6054.
- **Journal of Thermal Analysis and Calorimetry**, 'Preparation of hybrid composites of PLLA using GO/PEG masterbatch and their characterization', Athanasoulia I.-G., Giachalis K., Todorova N., Giannakopoulou T., Trapalis C., Tarantili P, **(2020)**, DOI: 10.1007/s10973-019-09227-z.
- **Polymer International**, 'The effect of PEG mixed with PLLA on the crystallization characteristics and properties of their blends', Athanasoulia I.-G., Christoforidis M., Korres D.M., Tarantili P.A., **68(4): 788-804 (2019)**, DOI: 10.1002/pi.5769.
- **Polymer Engineering and Science**, 'Thermal transitions and stability of melt mixed TiO₂/Poly(L-lactic acid) nanocomposites', Athanasoulia I.-G., Tarantili P.A., **59(4): 704-713 (2019)**, DOI: 10.1002/pen.24986.
- **Polymer Composites**, 'Thermomechanical properties and bioactivity evaluation of silicone rubber composites', Vasilakos S.P., Athanasoulia I.-G., Tarantili P.A., Kyriakidou K., Papadopoulos T., **(2018)**, DOI:10.1002/pc.24240.
- **Materials Today: Proceedings, ELSEVIER**, 'Study of thermomechanical and antibacterial properties of TiO₂/Poly(lactic acid) nanocomposites', Ioanna-Georgia Athanasoulia, Maria Mikropoulou, Sofia Karapati, Petroula Tarantili, Christos Trapalis, **5(14)-1: 27553-27562 (2018)**, DOI: 10.1016/j.matpr.2018.09.075.
- **Pure and Applied Chemistry**, 'The effect of hydroxyapatite nanoparticles on crystallization and thermomechanical properties of PLLA matrix', Ioanna-Georgia I. Athanasoulia, Maximos N. Christoforidis, Dimitrios M. Korres and Petroula A. Tarantili, **89(1): 125-140 (2017)**, DOI: 10.1515/pac-2016-0912.
- **Pure and Applied Chemistry**, 'Preparation and characterization of polyethylene glycol/poly(L-lactic acid) blends', Ioanna-Georgia Athanasoulia and Petroula A. Tarantili, **89(1): 141-152 (2017)**, DOI: 10.1515/pac-2016-0919.

PRESENTATIONS IN SCIENTIFIC CONFERENCES WITH REVIEWERS

- 3 oral and 4 poster presentations in **international conferences**
- 5 oral presentations in **national conferences**
- Participation as volunteer and as co-ordinator.

AWARDS

2nd Prize for PhD thesis in NTUA School of Chemical Engineering, established in 2019 by the 'Michael N. Stassinopoulos VIOHALCO Public Benefit Foundation', in memory of Iakovos Giourounlian (<https://www.ntua.gr/promitheas-js/content/magazine/#page/4>).

1st Materials Chemistry Frontiers Poster Prize at POC 2016, IUPAC sponsored 16th International Conference 'Polymers and Organic Chemistry', 13-16 June 2016, Hersonissos, Greece, by the Royal Society of Chemistry (https://blogs.rsc.org/qm/2016/07/?doing_wp_cron=1603778092.7211630344390869140625).

WORK EXPERIENCE

11/2017-12/2018: STEM (Science Technology Engineering Maths) Educator & STEM in English – Young Engineers.

09-10/2012 & 07-09/2011: Department of Process and Engineering, ASPROFOS SA (Hellenic Petroleum SA) Employment in the field of refinery design and other studies, working closely with process engineers.

07-08/2012: Customer Service and Routing Department, CORALGAS SA (MotorOil Group (HELLAS) Corinth Refineries SA), Work on organizing the LPG product routing system and gaining experience in using SAP software to collect and analyze data relating to sales, financial results and operations of the company.

07-08/2010: Aspropyrgos Refinery Laboratory of Hellenic Petroleum SA
Employment in fuel quality control as well as control of refinery production processes, working closely with chemical technicians, attending all process safety reviews as necessary and making sure that all agreed recommendations are followed.

LANGUAGE SKILLS

English: Business fluent

Certificate of Proficiency in English, (University of Cambridge, 2006)

Certificate of Proficiency in English, (University of Michigan, 2005)

French: Fluent

Diplôme d'études en langue française: Delf B2, (Institut Français d' Athènes, 2014)

Spanish: Advanced in written and spoken (Level **B2**).

SPECIAL SKILLS

1. **Certified Home Energy Rater**, Research Laboratory of Energy Applications and Energy Saving Systems, University of West Attica, February 2020
2. **Proficient computer skills:** Microsoft Office™, Ms Windows, Origin, Internet Explorers
3. **Engineering software:** Matlab, AutoCad, COMSOL Multiphysics, MathCad, AspenPlus, MsProject
4. **Business software:** Basic knowledge of SAP
5. **Handling of specialized analysis instruments and results' analysis of:** Twin-screw extruder, Hydraulic thermopress, Pulverizer, Pelletizer, High-performance liquid chromatography (HPLC), Scanning electron microscopy (SEM), ImageJ® analysis, Differential Scanning Calorimetry (DSC), Thermogravimetric Analysis (TGA), Dynamic mechanical analysis (DMA), Scanning electron microscopy (SEM), Raman spectroscopy, UV-Vis Spectroscopy, X-Ray Diffractometry (XRD), Tensile test-Flexure test machine, Impact test machine, Capillary rheometer (MFI), Fourier transform infrared spectrometer (FT-IR), Ultraviolet-visible spectrometer (UV-Vis), Sun test system
6. **Standard methods:** ISO DIS 27447:2009